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December 7, 2010

Mr. Mike Johnson
Board of Oil, Gas and Mining
Utah Division of Oil, Gas, and Mining
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Re: **Request for Continuance or in the Alternative Request for Conditions to be Attached to the Issuance of the UIC permit relating to:** ***In the Matter of the Application of Westwater Farms, LLC for Administrative Approval of the Harley Dome 1 SWD Well Located in Section 10, Township 19 South, Range 25 East, S.L.M. Grand County, UTA, as a Class II Injection Well.***

Dear Mike,

This letter is intended to serve as a request for continuance or alternatively request certain conditions be attached and incorporated to the issuance of the UIC permit for the Class II Injection Well of the Harley Dome to Westwater Farms, LLC.

Generally, information and documentation provided to the Board is not definitive. It appears that they just reamed out an older well drilled into the crest of the Bitter Creek anticline, and had Halliburton run geophysical logs down to 1725 ft. It mentions fluids with chloride concentrations at 22,000 ppm, but does not mention a water level in the well. No mention of what formation is producing the water, but the well is over 7000 ft deep so unless it was cemented back when abandoned the water could be from any one of several formations.

The structure contours on the Westwater geologic map indicate that the top of the Entrada at the well should be 150 to 200 ft lower than it is in the river canyon. The Kayenta is the next formation under the Entrada. Both are exposed in the Colorado River canyon 4.2 miles to the southeast. The well surface altitude is about 4930'; the base of the Entrada in the canyon is about

4400'. Formation dip is about 0.5 degrees toward the northwest. If they are injecting into the Entrada or the Kayenta at 360 psi that is the equivalent of raising the water level another 832 feet above its existing level. The application lacks sufficient information concerning this issue and/or any monitoring concerns concerning water levels.

Monitoring the pressure head in wells between the injection site and the river would be necessary to see how far the created pressure head propagates toward the river canyon. If you assume the static water level in the well was at the top of the Entrada Formation (4930'-550'=4380') and the bottom of the Entrada is at 4400' then presently there is virtually no gradient toward the river. If you raise the water level in the well 832' by injecting at 360 psi, then you have created a gradient toward the river of 4380+832=5212-4400=812/22176 ft/ft or 0.0366 ft/ft. If we estimate the average linear (assuming no fracture flow) velocity using---> vel = (K*gradient)/porosity, if k = 0.5 ft/d and porosity = .15; then average linear velocity would be around 0.12 feet per day. That means any fluid moving from the well toward the river would take about 65000 years to get there. If there are open fractures associated with the anticlinal flexure then that time would be shortened.

In addition to the above delineated issues and concerns related to the issuance of Westwater Farms' permit request, following is a list of other good faith issues and concerns validating the need for continuance of the Board's decision to issue Westwater Farms a permit for a Class II Injection Well or if issued be subject to the following conditions proposed:

Geophysical Questions/Concerns:

A. LACK OF CAPITAL

We are concerned that Westwater Farms does not have sufficient capital at the onset of the proposed project to implement their final plan as described in the application. This indicates that the present venture is speculative and justifies the immediate denial of this application and permit. The applicant should secure the necessary funding for a complete project first, and then apply for permission to operate in Grand County.

B. BURDENS TO GRAND COUNTY

The facility will create financial burdens for the county because the county does not have the funds or the staff to properly monitor the compliance issues concerning operations at Westwater Farms. The facility will not create any jobs for Grand County, and the wholesale and retail purchasing for the facility will benefit Mesa County, Colorado and not Grand County, Utah.

C. BONDING AND DECOMMISSIONING

The bonding for Westwater Farms, at $15,000, is much too modest and there is no mention of plugging the well if decommissioning occurs. Experience often shows that the actual cost for decommissioning can be 2 - 5 times the initial projected cost. An amended bond should be provided before operations begin which could be used if an unseen problem, such as leakage

into the Colorado Rivir was to occur.

D. ELECTRICITY

There is no discussion of how the facility is to be powered during the initial start-up operations and how the lack of electricity or back up systems would effect safe operations at Westwater Farms. The people of Grand County are very aware that the "Rattlesnake" power line, that services rural Grand County, is notorious for blackouts when the demand is high. If Westwater Farms ties into this power line, they will stress the reliability of this power line even further. A main generator and a back-up generator, of ample power supply for the intended purposes of the facility, should be on site before operations begin.

E. CHEMICAL ANALYSIS OF THE PRODUCED WATER

Since the produced water is arriving from many different drilling and fracking operations in the Colorado Plateau, the chemical signatures and magnitudes will be varied. It is reasonable to propose that the schedule of water sampling be increased from once a month to weekly.

F. AIR QUALITY

We are uncertain what kind of pollutants and the quantity of pollutants will be released into the atmosphere during the interim time-period when production water is accepted to generate capital to bring the facility to full operation. The state of Utah is aware that the cumulative impacts on air quality in rural Utah are already quite severe. See, e.g. http://www.livingrivers.org/pdfs/Press/OzoneRaisesInRuralEastermUtah.pdf. There needs to be a more complete air quality monitoring system put into place.

G. MONITORING WATER QUALITY

The response of Stewart Environmental Consultants to the Fish and Wildlife Service for water quality monitoring is not effective or comprehensive. It states that an employee will conduct three field trips in one year and only in Westwater Canyon where the Wingate Formation is exposed.

Though the bedding planes of the bedrock slope to the north and east, the bedding planes to the south are fractured by the Uncompahgre Uplift. It is possible that a pressurized aquifer (360 psi) could seep through these fractures and enter the Colorado River. The canyon cutting of the Colorado River has removed considerable amounts of overburden, and it is reasonable to assume that the waste water would migrate toward the Colorado River, since the density pressure at the gorge is lower than to than the overburden pressures to the north.

Moreover, sandstones with high transmissivity also occur above Westwater Ranger Station, and actually have a closer proximity to the injection well than Westwater Canyon. Besides Westwater Canyon, there is also known population of endangered fish above Westwater Ranger Station in Ruby Canyon.

Furthermore, some of these porous sandstones extend below the surface of the Colorado River and, consequently, any seep below the level of the river's surface would be undetected by a casual observer on a field trip.

The only effective way to know conclusively that the Colorado River is safe from fracking fluid contamination, is to install at least three monitoring wells (east, southeast and south) between the injection well and the Colorado River. This should be accomplished before the contractor receives permission to begin operations.

The proposed monitoring wells need to be made as a condition to be fulfilled before any wastewater is accepted for injection operations begins.

H. BLM MOAB DISTRICT RESPONSE FOR FURTHER REVIEW

Moab citizen William Love informed me that Jeffrey "Rock" Smith has agreed to have his staff to look into the matter of fluids migrating under pressures of 360 psi. This may take a couple weeks. It would appear there is no data on this subject in the BLM office, and if there is, it is likely to be proprietary information belonging to the oil corporations.

In conclusion, Living Rivers requests the Board to either postpone the decision requested by Westwater Farms until additional necessary data is generated sufficient to answer questions raised by this letter. Alternatively, the Board should place certain conditions on the Westwater Farms application suggested by this letter. Specifically, the three monitoring wells must be drilled before any injections occur. We look forward to our discussion during the hearing scheduled for December 8, 2010.

Sincerely,

Patrick A. Shea

cc: Steve Alder